

The Study: Phase I



The Delaware Air Toxics Assessment Study (DATAS) represents one of the largest and most comprehensive studies of air toxic contaminants and the risks to human health undertaken in the Mid-Atlantic region.

The Department of Natural Resources and Environmental Control's (DNREC) Air Quality Management Section developed DATAS as a two-phase project. Phase I includes work completed as of June 30, 2005.

Over a one-year period, 119 air toxic chemicals were monitored at five locations throughout the state. The five sites included three in New Castle County—Martin Luther King Boulevard in Wilmington, Delaware City, and Lums Pond State Park near Middletown, one in Kent County at Killens Pond State Park and another in Sussex County near Seaford.

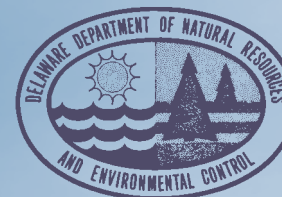
Phase I includes results of DNREC's monitoring program and an expanded emissions inventory of air toxic contaminants. The potential risk for cancer and adverse human health effects were determined for the locations near the monitoring sites. The results are included in the charts shown in this brochure.



When completed in 2006, Phase II will include air dispersion modeling and an assessment of potential risks to human health throughout Delaware.

DNREC received significant technical advice from the Department of Health and Social Services' Division of Public Health to complete the human health risk assessments for this study.

For more information:



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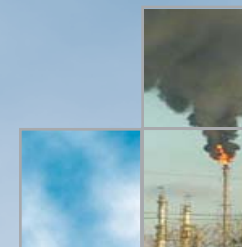
[www.dnrec.state.de.us/
air/aqm_page/DATAS.htm](http://www.dnrec.state.de.us/air/aqm_page/DATAS.htm)

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Funding for DATAS outreach and education made possible by the Delaware Cancer Consortium.

Doc. No. 40-01-05/06/01/01

Delaware Air Toxics Assessment Study DATAS



Cumulative Risk Assessments for Cancer Cases Exposure to All Chemicals/5 Monitoring Sites

Risk Scenarios	Martin Luther King Area Site	Delaware City Area Site	Lums Pond Area Site	Felton Area (Killens Pond) Site	Seaford Area Site
Adult	3.2 additional cancer cases per 100,000 exposed people	2.2 additional cancer cases per 100,000 exposed people	1.8 additional cancer cases per 100,000 exposed people	1.9 additional cancer cases per 100,000 exposed people	1.8 additional cancer cases per 100,000 exposed people
Child	1.4 additional cancer cases per 100,000 exposed people	Less than 1 additional cancer case per 100,000 exposed people	Less than 1 additional cancer case per 100,000 exposed people	Less than 1 additional cancer case per 100,000 exposed people	Less than 1 additional cancer case per 100,000 exposed people
Age-adjusted (combination of adult and child)	4.4 additional cancer cases per 100,000 exposed people	3.5 additional cancer cases per 100,000 exposed people	2.6 additional cancer cases per 100,000 exposed people	2.7 additional cancer cases per 100,000 exposed people	2.5 additional cancer cases per 100,000 exposed people

Legend

High
Increased
Low

High Risk: 10 or more additional cancer cases per 100,000 exposed people
Increased Risk: Greater than 1 but less than 10 additional cancer cases per 100,000 exposed people
Low Risk: 1 or less additional cancer cases per 100,000 exposed people

Cumulative Adverse Health Effect Level for Non-Cancer Exposure to All Chemicals/5 Monitoring Sites

Risk Scenarios	Martin Luther King Area Site	Delaware City Area Site	Lums Pond Area Site	Felton Area (Killens Pond) Site	Seaford Area Site
Adult	Adverse health effect level of 1.2	Adverse health effect level less than 1	Adverse health effect level of less than 1	Adverse health effect level of less than 1	Adverse health effect level of less than 1
Child	Adverse health effect level of 2.6	Adverse health effect level of 1.4	Adverse health effect level of 1.4	Adverse health effect level of 1.3	Adverse health effect level of 1.3
Age-adjusted (combination of adult and child)	Adverse health effect level of 1.6	Adverse health effect level of less than 1	Adverse health effect level of less than 1	Adverse health effect level of less than 1	Adverse health effect level of less than 1

Legend

High
Increased
Low

High Level: Adverse health effect level of 10 or greater.
Increased Level: Adverse health effect level between greater than 1 but less than 10.
Low Level: Adverse health effect level of 1 or less.

Cumulative Risk for Cancer

This chart shows the cumulative risk for cancer from exposure to all chemicals at each of the five monitoring sites.

None of the five monitoring sites had cancer risks in the high risk range (red).

Risk assessments are expressed as probabilities of additional cases of cancer above the expected background level.

The risk assessments do not predict the incidence of disease. The assessments do not absolutely mean that an actual cancer case will exist.

Cumulative Adverse Health Effect Level for Non-Cancer

This chart shows the cumulative adverse health effect level from exposure to all chemicals at each of the five monitoring sites.

Adverse health effects are health conditions other than cancer, including asthma, which can develop from chronic exposure to air toxic contaminants.

None of the five monitoring sites had adverse health effect levels in the high range (red).